

# DT Curriculum – 2 Year Cycle

## KS1



### Intent

Learning is a change to long term memory. Our aims are to ensure that our students experience a wide breadth of study based on the national curriculum and have, by the end of each key stage, long-term memory of curriculum knowledge.

We aim to inspire in pupils a curiosity and fascination about D&T in order to encourage them to be creative and innovative in order to make products and solve real and relevant problems within a variety of contexts.

### Implementation

D&T is taught through the 'Threshold Concepts' of Master Practical Techniques, Take Inspiration from Design and Design, Make, Evaluate and Improve. Each threshold concept is split into knowledge categories that teachers will explore with the children. Deliberate practise of these, whereby knowledge will be revisited, will enable a gradual deepening of their understanding. We believe that learning is most effective with this spaced repetition and the interleaving between topics and frequently revisiting them, aids long term retention.

Teachers will utilise real life examples, a variety of mediums and a range of teaching styles in order to develop their understanding of D&T so that children are increasingly able to design, make, evaluate and improve their own ideas.

### Impact

Because learning is a change to long term memory it is impossible to see impact in the short term. However, we do use probabilistic assessment based on deliberate practise. This means that we look at the practices taking place to determine whether they are appropriate, related to our end of key stage goals. We use comparative judgements against Milestone statements, in the tasks we set (POP tasks) and in tracking students' work over time. We use lesson observations to see if the pedagogical style matches our depth expectations.

Impact is also measured through key questioning skills built into lessons, child-led assessment against the objective (WAGBA), and summative assessments aimed at targeting next steps in learning.

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Year Group	Cycle	Autumn <i>Threshold Concepts</i> <i>Knowledge Categories</i>	Spring <i>Threshold Concepts</i> <i>Knowledge Categories</i>	Summer <i>Threshold Concepts</i> <i>Knowledge Categories</i>
1/2	<b>A</b>	<b>Textiles/Materials: templates and joining</b>  <b>Cooking</b>  <i>Master practical skills</i> <i>Design, make, evaluate and improve</i> <i>Technical Knowledge / Practical Knowledge / Design inspiration / Design Process</i>	<b>Mechanics: Sliders and Levers</b> <b>Moving Pictures</b>  <i>Master practical skills</i> <i>Design, make, evaluate and improve</i> <i>Take inspiration from design throughout history</i> <i>Technical Knowledge / Practical Knowledge / Design inspiration / Design Process</i>	<b>Food: Preparing and Design</b>  <i>Master practical skills</i> <i>Design, make, evaluate and improve</i> <i>Technical Knowledge / Practical Knowledge / Design inspiration / Design Process</i>
	<b>B</b>	<b>Food: Preparing and Design</b>  <i>Master practical skills</i> <i>Design, make, evaluate and improve</i> <i>Technical Knowledge / Practical Knowledge / Design inspiration / Design Process</i>	<b>Mechanisms: Wheels and axles</b> <b>Vehicle</b>  <b>Cooking</b>  <i>Master practical skills</i> <i>Design, make, evaluate and improve</i> <i>Take inspiration from design throughout history</i> <i>Technical Knowledge / Practical Knowledge / Design inspiration / Design Process</i>	<b>Construction: Structures - Freestanding structures</b> <b>Stable structures</b>  <b>Cooking</b>  <i>Master practical skills</i> <i>Design, make, evaluate and improve</i> <i>Take inspiration from design throughout history</i> <i>Technical Knowledge / Practical Knowledge / Design inspiration / Design Process</i>

**Link to Art & Design**

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### Key Stage 1 Teaching Sequence for DT (Milestone 1) CYCLE A

Each term includes the Key concepts of: *Master Practical Skills, Design, Make, Evaluate and Improve, Take Inspiration from design*

Weeks	Autumn Term	Spring Term	Summer Term
<b>Topic Title:</b>	<b>Textiles: Templates and Joining Food: Cooking</b>	<b>Mechanics: Sliders /Levers</b>	<b>Food: Preparing Portable Snack Couscous Dish</b>
<b>1</b>	<i>Textiles/Technical knowledge/ Practical knowledge:</i> What is joining? Practise joining textiles using running stitch	<i>Introduce Sliders/Technical knowledge:</i> What is a slider? <b>P79</b>	<i>Food Preparation: Finger fluency/ Practical knowledge:</i> spreading, grating, peeling, fork secure, bridge hold and folding. <b>P135</b>
<b>2</b>	<b>Retrieval</b>	<b>Retrieval</b>	<b>Retrieval</b>
<b>3</b>	<i>Textiles/Materials/ Practical knowledge:</i> Colour and decorate textiles using a number of techniques (such as <b>dip dyeing</b> , adding sequins or printing). Cut materials safely using tools provided. Measure and mark accurately.	<i>Make sliders with templates/Practical knowledge</i> Look at examples and use card to create using the templates. <b>P81/83/85</b>	<i>Design portable snack/Design inspiration: wrap</i> Designers take inspiration from existing products. Consider purpose and how it's designed <b>P138</b>
<b>4</b>	<b>Retrieval</b>	<b>Retrieval</b>	<b>Retrieval</b>
<b>5</b>	<i>Design/Design inspiration:</i> a Christmas card that involves joining textiles ( <b>running stitch and glue</b> ) with practised skills. Evaluate and improve design. Look at a variety of Christmas cards for inspiration.	<i>Introduce Levers/Technical knowledge:</i> What is a lever? Label and annotate a picture of a lever mechanism. <b>P99-104</b>	<i>Guided design/ Design process:</i> Make portable snack: wrap <b>P143-145</b>
<b>6</b>	<b>Retrieval</b>	<b>Retrieval</b>	<b>Retrieval</b>
<b>7</b>	<i>Make/Design process:</i> a Christmas card: make planned design, evaluate and amending as necessary.	<i>Design/ Design inspiration</i> an Easter card that involves sliders or levers to make the picture design move. Look at examples, past and present. Clearly annotate diagram so that the workings are clear. Possibly use computer design on purple mash to develop design	<i>Couscous dish/ Design inspiration</i> – Design using inspiration from existing products. Consider purpose, features. <b>P149-153</b>
<b>8</b>	<b>Retrieval</b>	<b>Retrieval</b>	<b>Retrieval</b>

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<p><b>9</b></p>	<p><b>Food/ Practical knowledge/Design inspiration/design process:</b> Follow ingredients and instructions for making Christmas Biscuits. Include skills or measuring/weighing out ingredients. Evaluate biscuits and make notes on what went well/could be improved.</p>	<p><b>Make design/ Design inspiration/Design process:</b> make planned design, evaluating and amending as necessary.</p>	<p><b>Couscous dish/ Design process:</b> Make couscous dish + evaluate the look of your couscous dish. Re-think by applying your technical and practical knowledge. Modify recipe + explain decisions.</p>
<p><b>10</b></p>	<p><b>Retrieval</b></p>	<p><b>Retrieval</b></p>	<p><b>Retrieval</b></p>
<p><b>11</b></p>	<p><b>Evaluate/ Design process</b> final product. Take a photo of item to put into book with an evaluation of product. What was easy/more difficult, what would you have changed.</p>	<p><b>Evaluate/ Design process</b> final product. Take a photo of item to put into book with an evaluation of product.</p>	<p><b>Technical Knowledge / Practical Knowledge</b> <b>Electricals and Electronics:</b> Diagnose faults in battery operated devices (such as low battery, water damage or battery terminal damage)</p>
<p><b>12</b></p>	<p><b>POP TASK</b> – write instructions to join two textiles using running stitch.</p>	<p><b>POP TASK</b> – how do sliders/levers work</p>	<p><b>POP TASK</b> – Check that pupils are remembering the important take-aways from this topic</p>

**KS1**

*It's time to dance!*

**P156**

**Electricals and Electronics:** Diagnose faults in battery operated devices (such as low battery, water damage or battery terminal damage)

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## KS1



Key Stage 1 Teaching Sequence for DT (Milestone 1) CYCLE B			
Each term includes the Key concepts of: <i>Master Practical Skills, Design, Make, Evaluate and Improve, Take Inspiration from design</i>			
Weeks	Autumn Term	Spring Term	Summer Term
Topic Title:	<b>Food: Preparation Design</b>	<b>Mechanics: Wheels and axles Vehicle Cooking</b>	<b>Structures: Freestanding structures Solid structures Cooking</b>
<b>1</b>	<i>Food Preparation/ Practical knowledge:</i> Practise spreading, grating, peeling, fork secure, bridge hold	<i>Mechanics/Technical knowledge:</i> What are wheel and axle mechanisms to enable things to move? How do they work? <b>P115</b> Vocab to understand: mechanism, rotate, force. Draw annotated diagrams to show what happens to the speed and force of a wheel/axle when turned. Look at how designs have changed over time.	<i>Structures /Technical knowledge:</i> What is a structure? 3 elements: beams, columns, slabs. Include natural and manufactured. Draw a labelled diagram of a manufactured frame structure (Climbing frame/step ladder etc) . <b>P43/47</b>
<b>2</b>	<b>Retrieval</b>	<b>Retrieval</b>	<b>Retrieval</b>
<b>3</b>	<i>Design fruit salad/Design inspiration/ Design process:</i> consider preferences for the ingredients. How could they make it attractive as well as tasty?	<i>Mechanics/ Practical knowledge Finger Fluency:</i> Practise making wheel/axle mechanisms using measuring/cutting/joining to create high quality products. <b>P118-119</b>	<i>Construction/Practical knowledge:</i> practise cutting/joining to create frame structures – Cuboid, Triangular prism / anchored frame <b>P45</b>
<b>4</b>	<b>Retrieval</b>	<b>Retrieval</b>	<b>Retrieval</b>
<b>5</b>	<i>Make fruit salad/ Design process:</i> practise safe food handling, preparation skills with peeling/slicing etc. Think about presentation. Tasting test. Take photograph for book / Make notes	<i>Design/ Design inspiration:</i> Take inspiration from existing products. Design a wind powered vehicle-wheels, axle and sail. Use computer design on purple mash to develop design <b>P123-129</b>	<i>Design/Design Inspiration:</i> A chair for a soft toy. Look at existing designs and those from history for a chair. Consider structure. Plan. Use computer design on purple mash to develop design. <b>P49-55</b>
<b>6</b>	<b>Retrieval</b>	<b>Retrieval</b>	<b>Retrieval</b>
<b>7</b>	<i>Evaluate/ Design process:</i> Read through notes from last lesson. Consider thoughts on how preparation went, did they find anything more difficult to do. What went well? What could they have done differently that could improve their product.	<i>Make wind powered vehicle/ Design process:</i> Use design guide to make vehicle. Testing as they go through to ensure it works. Amend as necessary. <b>P125-131</b>	<i>Solid Structures/Technical knowledge/Design inspiration:</i> What is a solid structure (not hollow), natural and manufactured. Eg: mountain, Iceberg, coastal arch vs Dam, Wall, Pyramid, bridge. Vocab: solid, mortar, hollow, dam. Look at

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		<b>KS1</b>	designs, past and present and how they have changed over time.
<b>8</b>	<b>Retrieval</b>	<b>Retrieval</b>	<b>Retrieval</b>
<b>9</b>	<i>Design/ Design inspiration/Design process:</i> Look at a variety of Christmas cake designs, past and present. What looks effective? Create design for the top of individual sponge cake.	<i>Evaluate/ Design process:</i> Test vehicle to demonstrate how effective it is. What works well, what could have improved your design?	<i>Design and Make/ Design inspiration/Design process:</i> a stone bridge to cross a river. Consider design and use sugar cubes as bricks. Consider changing how bricks are placed to give more strength. Take photos and evaluate the weight the structure could take.
<b>10</b>	<b>Retrieval</b>	<b>Retrieval</b>	<b>Retrieval</b>
<b>11</b>	<i>Make Christmas cake /Practical knowledge</i> – including design for top of cake. Taste and evaluate cake.	<i>Cooking/Practical knowledge/Design process:</i> Practice food hygiene when making pizza. Choose healthy ingredients to create a pizza. Explain choices and take a photo of finished pizza. Photo into book explaining why toppings were chosen.	<i>Cooking :</i> Practise food hygiene when making smoothie. Choose healthy ingredients to create. Explain choices and take a photo of finished smoothie. Photo into book explaining why ingredients were chosen.
<b>12</b>	<b>POP TASK</b> – skills/safety/hygiene needed for food preparation	<b>POP TASK</b> – mechanisms explaining wheels/axle enabling things to move.	<b>POP TASK</b> – structures and vocabulary